WHAT IS CLAIMED IS:

1. In an optical communication system comprising at least two optical fibers, a method of locating faults, the method comprising:

supplying an optical test signal to a first optical fiber, wherein the optical test signal propagates on the first optical fiber in a first direction;

providing a coupling device to optically couple the first optical fiber to a second optical fiber;

receiving the optical test signal on the second optical fiber via the coupling device, wherein the optical test signal propagates on the second optical fiber in the first direction, reaches a termination point on the second optical fiber and reflects back on the second optical fiber in a second direction opposite to the first direction; and

analyzing the reflected signal received on the second optical fiber.

2. The method of claim 1, further comprising:

determining whether any faults exist on at least one of the first and second optical fibers based on the analyzing.

3. The method of claim 1, wherein the analyzing includes analyzing the reflected test signal using an optical time domain reflectometer.

4. The method of claim 1, wherein the receiving the optical test signal on the second optical fiber includes:

receiving a portion of light associated with the optical test signal via the coupling device.

5. The method of claim 1, wherein the optical test signal reaches a termination point on the first optical fiber, reflects back on the first optical fiber in the second direction and is blocked from propagating to its origination point by at least one isolator disposed on the first optical fiber, and

wherein the at least one isolator is associated with a filtering device coupled to the first optical fiber.

6. The method of claim 5, further comprising:

transmitting the optical test signal through a plurality of repeater devices located upstream of the filtering device.

7. The method of claim 6, wherein the filtering device comprises a gain shape compensation filter.

8. The method of claim 5, further comprising:

connecting the coupling device to the first optical fiber at a location upstream of the filtering device and at least one isolator.

9. An optical transmission system, comprising:

a first communication path comprising a first optical fiber configured to receive a test signal;

at least one optical isolator disposed along the first communication path, the at least one optical isolator being configured to permit propagation of light in a first direction and substantially prevent propagation of light in a second direction opposite to the first direction;

a second communication path comprising a second optical fiber; and

a coupling device coupled to the first optical fiber at a location upstream of the at least one optical isolator, the coupling device being configured to:

optically couple the first and second optical fibers, and

allow light from the test signal to be propagated from the first optical fiber to the second optical fiber, and

wherein the light propagated onto the second optical fiber propagates in the first direction, reaches a termination point and reflects back on the second optical fiber in the second direction.

10. The optical transmission system of claim 9, further comprising:

an analyzing tool configured to analyze the reflected signal received on the second optical fiber.

11. The optical transmission system of claim 10, wherein the analyzing tool comprises

an optical time domain reflectometer.

12. The optical transmission system of claim 9, further comprising:

an optical time domain reflectometer configured to:

transmit the test signal on the first optical fiber, and

analyze the reflected light on the second optical fiber.

13. The optical transmission system of claim 9, further comprising:

a gain shape compensation filter disposed on the first optical fiber and coupled to the at least one optical isolator, wherein the coupling device is coupled to the first optical fiber at a location upstream of the gain shape compensation filter.

14. The optical transmission system of claim 9, further comprising:

a plurality of repeaters disposed on the first communication path at a location upstream of the at least one optical isolator, the repeaters being configured to amplify the test signal.

15. The optical transmission system of claim 14, further comprising:

a filtering device coupled to the at least one optical isolator, the filtering device being located externally from the plurality of repeaters.

16. The optical transmission system of claim 9, further comprising:

a photodetector disposed on the first communication path; and

a pump source optically coupled to the first optical fiber at a location downstream from the photodetector, the pump source being configured to propagate energy to the first optical fiber in the second direction, whereby the energy is prevented from propagating to the photodetector by the at least one isolator.

17. An optical communication system, comprising:

a first optical fiber configured to receive a test signal and propagate the test signal in a first direction;

a plurality of repeaters coupled to the first optical fiber, each repeater being configured to amplify the test signal;

an optical isolator coupled to one of the repeaters, the optical isolator preventing propagation of a reflection of the test signal in a second direction opposite to the first direction;

a second optical fiber; and

a coupler configured to optically couple the first optical fiber to the second optical fiber, and

wherein the test signal propagates on the second optical fiber in the first direction, reaches a termination point and reflects back in the second direction on the second optical fiber.

18. The optical communication system of claim 17, further comprising:

an optical time domain reflectometer, the optical time domain reflectometer being

configured to:

generate the test signal,

inject the test signal into the first optical fiber, and

analyze the reflected signal received on the second optical fiber.

19. The optical communication system of claim 17, further comprising:

a filtering device coupled to the at least one isolator, wherein the filtering device and the at least one isolator are located externally from the plurality of repeaters.

20. A method for locating faults in an optical communication system, the optical communication system including first and second optical fibers forming an optical fiber pair having a first end and a second end, the method comprising:

supplying, using an optical time domain reflectometer, a first test signal to the first end of the first optical fiber, the first test signal propagating in a first direction;

directing light from the first test signal onto the second optical fiber via a coupling device, the directed light propagating in the first direction on the second optical fiber and reflecting back in a second direction on the second optical fiber;

receiving, at the optical time domain reflectometer, the reflected light on the second optical fiber; and

analyzing the reflected light to determine whether any faults exist in the optical communication system.

21. The method of claim 20, further comprising:

transmitting the first test signal through a plurality of repeaters, each repeater configured to amplify the first test signal using Raman amplification techniques.

22. The method of claim 21, wherein the at least one isolator comprises first and second isolators, the first and second isolators being coupled to a gain shape compensation filter disposed on the first optical fiber.

23. The method of claim 22, wherein the gain shape compensation filter and the first and second isolators are located externally from the plurality of repeaters.

24. The method of claim 20, further comprising:

supplying, using an optical time domain reflectometer, a second test signal to the second end of the second optical fiber, the second test signal propagating in the second direction;

directing light from the second optical test signal onto the first optical fiber, the directed light propagating in the second direction on the first optical fiber and reflecting back in the first direction on the first optical fiber;

receiving, at the optical time domain reflectometer, the reflected light on the first optical fiber; and

analyzing the reflected light to determine whether any faults exist in the optical communication system.

25. A system for locating faults in an optical communication system, comprising:

means for transmitting a test signal in a first direction on a first optical fiber;

means for optically coupling the first optical fiber to a second optical fiber, wherein the test signal propagates on the second optical fiber in the first direction and reflects back in a second direction opposite to the first direction; and

means for analyzing the reflected test signal.

26. An optical communication system, comprising:

a first optical fiber configured to transmit optical signals in a first direction;

a second optical fiber configured to transmit optical signals in a second direction opposite to the first direction;

an optical isolator disposed on the first optical fiber, the optical isolator being configured to limit the propagation of optical signals to a first direction;

a filter disposed on the first optical fiber and coupled to the optical isolator, the filter being configured to filter the optical signals; and

a coupler configured to receive an optical test signal from the first optical fiber and optically couple the optical test signal to the second optical fiber, the coupler being connected to the first optical fiber at a location upstream of the optical isolator, and

wherein the optical test signal propagates on the second optical fiber in the first direction and reflects back on the second optical fiber in the second direction.

27. The optical communication system of claim 26, further comprising:

an optical time domain reflectometer, the optical time domain reflectometer being configured to:

generate the optical test signal,

inject the optical test signal onto the first optical fiber, and

analyze the reflected signal received on the second optical.

28. The optical communication system of claim 26, further comprising:

a plurality of repeaters coupled to the first optical fiber, each of the repeaters configured to amplify optical signals transmitted on the first optical fiber, and

wherein at least one of the plurality of repeaters employ Raman amplification techniques to amplify the optical signals.

29. A repeater comprising:

a first optical fiber configured to receive an optical signal;

a coupling system configured to couple a portion of said optical signal to a second optical fiber; and

an isolator configured to ensure uni-directional propagation of optical signal energy,

wherein said coupling system is connected to said first optical fiber at a location upstream of said isolator.

30. The repeater of claim 29, further comprising:

a detector connected to said second optical fiber and configured to detect a power level associated with said optical signal, wherein said location of said connection of said coupling system to said first optical fiber upstream of said isolator isolates said detector from contrapropagating pump energy.

31. A repeater comprising:

a first optical fiber configured to receive an optical signal;

at least one optical isolator disposed on the first optical fiber, the at least one optical isolator being configured to permit propagation of light in a first direction and substantially prevent propagation of light in a second direction opposite to the first direction;

a second optical fiber; and

a coupling system coupled to the first optical fiber at a location upstream of the at least one optical isolator, the coupling system being configured to:

optically couple the first and second optical fibers, and

allow light from the optical signal to be propagated from the first optical fiber to the second optical fiber, and

wherein the light propagated onto the second optical fiber propagates in the first direction, reaches a termination point and reflects back on the second optical fiber in the second direction.

32. The repeater of claim 31, further comprising:

a gain shape compensation filter disposed on the first optical fiber and coupled to the at least one optical isolator, wherein the coupling system is coupled to the first optical fiber at a location upstream of the gain shape compensation filter.